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3/11/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

Masumitsu INO et al.

Serial No.: 09/424,544

File: November 24, 1999

For: LIQUID CRYSTAL DISPLAY DEVICE

Examiner: J.Piziali

Group Art Unit: 2673

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PETITION UNDER 37 C.F.R. § 1.144

Commissioner of Patents  
Washington, DC 20231

Sir:

This is a petition under 37 C.F.R. § 1.144 requesting review of a restriction requirement made by the Examiner in the non-final Office Action mailed on September 28, 2001.

Claims 1-39 are pending in this application, with claims 21-39 being added by the amendment filed along with this petition.

The restriction requirement of August 17, 2001 asserts an existence of the following independent and distinct inventions:

Group 1, claims 1-9 classified in class 345, subclass 204.

Group 2, claims 3 and 10-20, classified in class 345, subclass 94.

A Request for Reconsideration of the restriction requirement was filed on September 17, 2001.

In response to the Request, the non-final Office Action mailed on September 28, 2001 maintained the restriction requirement, making it FINAL. Within the non-final Office Action mailed on September 28, 2001, claims 1-2 and 4-9 were restricted and withdrawn by the Examiner as a non-elected invention.

Accordingly, this petition pursuant to 37 C.F.R. § 1.144 is proper. See 37 C.F.R. § 1.499.

For the reasons provided hereinbelow, Applicant respectfully traverses the restriction requirement made within the non-final Office Action mailed on September 28, 2001.

As an initial matter the alleged Group 1 includes claims 1-9, while the alleged Group 2, claims 3 and 10-20. Note that claim 3 is included within both alleged Group 1 and alleged Group 2. Thus, the restriction requirement is improper.

The above-identified application is an application under 35 U.S.C. § 371. According to M.P.E.P. § 1893.03(d), the principles of unity of invention are used to determine the types of claimed subject matter and the combinations of claims to different categories of invention that are permitted to be included in a single international or national stage patent application. As further explained within M.P.E.P. § 1893.03(d), a group of inventions is considered linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding special technical feature. The expression special technical features is defined as meaning those technical features that define the contribution which each claimed invention, considered as a whole, makes over the prior art.

The background description within the specification provides that if a general driver IC is used for the signal lines, a surplus occurs. This surplus is depicted in figure 1 as the extra output lines for the rightmost driver IC 101 (specification page 2, line 21 to page 3, line 6). Thus, a disclosed the special technical feature includes a liquid crystal display which can realize a narrow width in the horizontal direction of the liquid crystal display panel in case of using an external driver IC (specification as originally filed at page 3, lines 18-24).

Specifically, regarding claim 1, page 14, line 27 to page 15, line 2 of the specification provides that a surplus connecting region which does not contribute to the image display does not occur on the liquid crystal panel. Regarding claim 3, page 16, lines 22-24 of the specification also provides that a surplus connecting region which does not contribute to the image display does not occur on the liquid crystal panel. Thus, the special technical feature of a surplus connecting region which does not contribute to the image display does not occur on the liquid crystal panel is the basis for both independent claim 1 and independent claim 3.

Claim 2 and newly added claims 21-22 are dependent upon claim 1. Claim 1 is characterized in that when the plurality of driver circuits are arranged in order while the numbers of output terminals of the driver circuits are set to a same number so as to have a correspondence relation with each of the signal lines of the plurality of columns, if a fraction occurs in the signal lines of the plurality of columns, the number of output terminals of one of the plurality of driver circuits is set to the fraction.

Referring to figure 5 for the features of claim 1, when a plurality of driver circuits 14 are arranged in order while the numbers of output terminals of the driver circuits 14-1 to 14-25

are set to a same number. For example, the numbers of output terminals of the driver circuits 14-1 to 14-25 are shown in figure 5 as 120 output terminals. As shown in figure 2, the numbers of output terminals of the driver circuits 14 has a correspondence relation with each of the signal lines 12 of the plurality of columns. Referring again to figure 5 for the features of claim 1, if a fraction occurs in the signal lines of the plurality of columns, the number of output terminals of one of plurality of driver circuits is set to the fraction. For example, the numbers of output terminals of the driver circuit 14-26 are shown in figure 5 as 72 output terminals (specification page 13, line 20). Thus, the special technical feature of a surplus connecting region which does not contribute to the image display does not occur on the liquid crystal panel has been provided within claim 1 (specification page 14, line 27 to page 15, line 2).

Claims 4-20 and newly added claims 23-24 are dependent upon claim 3. Claim 3 is characterized in that the number of output terminals of each of the plurality of driver circuits is set to a measure of the total number of signal lines of the plurality of columns.

Referring to figures 6, 7 and 13 for the features of claim 3, the number of output terminals of each of the plurality of

driver circuits is set to a measure of the total number of signal lines of the plurality of columns. For example, the numbers of output terminals of each driver circuit 14 are shown in figure 6 as 512 output terminals (specification page 15, line 19 to page 16, line 6). As an additional example, figures 7 and 13 include time-division switch 46. Thus, the special technical feature of a surplus connecting region which does not contribute to the image display does not occur on the liquid crystal panel has been provided within claim 3 (specification page 16, lines 22-24).

As shown hereinabove, the special technical feature of a surplus connecting region which does not contribute to the image display does not occur on the liquid crystal panel is the basis for both independent claim 1 and independent claim 3. Thus, a unity of invention exists and restriction is improper.

As to claims 4-9, claims 4-9 were the withdrawal of from consideration. The restriction requirement of August 17, 2001 asserts that the alleged Group 1 invention includes claims 4-9, while the alleged Group 2 invention includes claims 3 and 10-20. Note that claims 4-9 are dependent upon claim 3 and that claims 10-20 are also dependent upon claim 3. Dependent claims 10-20, being dependent upon claim 3, include the special technical features of independent claim 3. Likewise, dependent claims 4-9, also being dependent upon claim 3, include the special technical

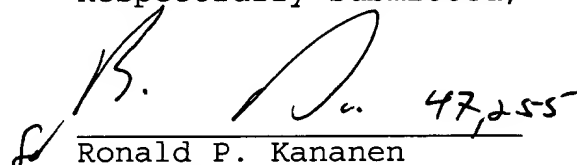
features of independent claim 3. Thus, a unity of invention exists and restriction is improper.

Applicant requests that the Commissioner exercise his supervisory authority under 37 C.F.R. § 1.144 and withdraw this improper restriction requirement.

No fee is believed to be required in connection with this petition. However, if any fee is required, authorization is given to charge Deposit Account 18-0013.

Respectfully submitted,

DATE: February 27, 2002

  
Ronald P. Kananen  
Reg. No. 24,104

**RADER, FISHMAN & GRAUER PLLC**  
Lion Building  
1233 20<sup>th</sup> Street, N.W.  
Washington, D.C. 20036  
Tel: (202) 955-3750  
Fax: (202) 955-3751  
Customer No. 23353